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Does Additional Limus Stent Implantation Influences Outcomes Compared with Balloon Angioplasty for Sirolimus-Eluting In-Stent Restenosis?

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Background: Additional limus stent (Sirolimus-eluting stent [SES] and Everolimus-eluting stent [EES]) on SES-ISR lesions has been a matter of controversy. This prompted us to assess the clinical outcomes of additional limus stent in patients presenting with SES-ISR comparing with balloon angioplasty.
Methods: Patients with SES-ISR undergoing repeat target lesion revascularization (TLR) were included. We grouped the patients according to the treatment into EES, SES, and balloon angioplasty (BA) groups. The end points were a comparison of major adverse cardiac events (MACE) composed by all-cause mortality, myocardial infarction (MI) and TLR, the incidence of definite stent thrombosis (ST), and the adjusted determinants of MACE at 1 year derived by Cox multivariate analysis.
Results: Overall 308 patients [EES (n=41), SES (n=102) and BA (n=165)] were treated for SES-ISR. The baseline patient characteristics were similar between 3 groups. The incidence of MACE in the EES, SES and BA groups were 14.6%, 18%, 20%; respectively (3 way p=0.72). The incidence of ST was 0% in all the groups. The adjusted determinants of MACE at 1 year were acute MI as SES-ISR presentation, number of treated lesions, diabetes mellitus, past MI history. (Table)
Conclusion: The incidence of MACE in patients with SES-ISR was not statistically different between an additional limus stent implantation (EES or SES) and balloon angioplasty. Additionally, MI as SES-ISR presentation was the strongest determinant of MACE at 1 year.

Multivariate analyses for predictors of 1-year MACE.

	HR	95% CI	P value
SES (compare to EES)	1.37	0.45-4.16	0.58
POBA (compare to EES)	1.64	0.55-4.86	0.37
Acute MI as SES-ISR presentation	3.11	1.26-7.68	0.014
Number of treated lesions	1.57	1.07-2.30	0.020
Diabetes mellitus	1.85	1.04-3.27	0.036
Past MI history	1.86	1.03-3.37	0.040

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Everolimus-Eluting Stent Equalizes the Clinical Outcome Among Patients Presenting with Paclitaxel and Limus Stent Failure

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Background: Previous studies show that drug-eluting stent (DES) in-stent restenosis (ISR) is a recurrent phenomenon. We aimed to assess the clinical outcomes of second-generation everolimus-eluting stent (EES) in patients presenting with different DES-ISR types.
Methods: Patients were grouped according to the everolimus (EES), paclitaxel (PES) and sirolimus (SES) eluting stents failure at the index procedure. The end point were the incidence of major adverse cardiac events (MACE: all-cause mortality, myocardial infarction [MI], or target lesion revascularization [TLR]), and definite stent thrombosis (ST). A Cox model was built to determine the predictors of MACE at 1 year.
Results: A total of 121 patients [EES (n=29), PES (n=26) and SES (n=66)] underwent TLR for DES-ISR were included. The baseline clinical and angiographic parameters were comparable between the groups. The incidence of MACE at 1 year was not statistically different between the groups (19.2% vs. 19.0% vs. 18.6%, 3 way p=1.0); respectively. No cases of ST occurred. The univariate predictors of MACE were: diabetes mellitus, past MI history, first ISR episode, and number of treated lesions. (Table)
Conclusions: The second generation EES equalizes the clinical outcome among different stent ISR types (limus or paclitaxel) with no ST up to 1 year. Apparently, the first ISR episode has a more benign profile compared with recurrent ISR. This findings encourages the use of second generation EES as a default strategy for the first ISR episode.

Univariate analysis for predictors of 1-year MACE.

	HR	95% CI	p value
PES failure (compare to EES failure)	0.95	0.26-3.54	0.94
SES failure (compare to EES failure)	0.91	0.30-2.77	0.86
Diabetes Mellitus	3.13	1.02-9.62	0.046
Past MI history	3.22	1.12-9.26	0.030
First ISR episode	0.31	0.11-0.88	0.027
Number of lesions treated	2.14	1.13-4.05	0.020

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ABSTRACT WITHDRAWN